

List of Claims:

Claim 1 (amended): A method for testing a semiconductor device having ~~at least one~~ a first sector of a first sector type and ~~at least one~~ a second sector of a second sector type, the method comprising:

measuring ~~at least one~~ a first time period related to erasing the first sector;
establishing ~~at least~~ a first test limit based ~~at least in part~~ on the first time period;
measuring ~~at least one~~ a second time period related to erasing the second sector;
establishing ~~at least~~ a second test limit based ~~at least in part~~ on the second time period; and

using ~~the first and second test limits~~, determining whether the device passes or fails an erase test by using the first test limit and the second test limit during the erase test.

21 **Claim 2 (amended):** The method of Claim 1, wherein the device comprises a plurality of first sectors and a plurality of second sectors, and the first test limit is based ~~at least in part~~ on an average of first time periods associated with ~~respective~~ the first time period for each of the first sectors and the second test limit is based ~~at least in part~~ on an average of second time periods associated with ~~respective~~ the second time period for each of the second sectors.

Claim 3 (amended): The method of Claim 1, further comprising:

measuring ~~at least one~~ a third time period related to erasing the first sector; and

measuring ~~at least one~~ a fourth time period related to erasing the second sector, the first and second time periods being erase time periods and the third and fourth time periods being APDE time periods, the first test limit being based ~~at least partially~~ on at least one of: the first and third time periods, the second test limit being based ~~at least partially~~ on at least one of: the second and fourth time periods.

Claim 4 (amended): The method of Claim 3, wherein the first test limit is based ~~at least~~ partially on both of the first and third time periods, and the second test limit is based ~~at least~~ partially on both of the second and fourth time periods.

Claim 5 (amended): The method of Claim 2, further comprising:
measuring ~~at least a~~ a third time periods related to erasing ~~respective~~ each of the plurality of
first sectors; and

measuring ~~at least a~~ a fourth time periods related to erasing ~~respective~~ each of the plurality of
second sectors, the first and second time periods being erase time periods and the third and
fourth time periods being APDE time periods, the first test limit being based ~~at least partially~~ on
at least one of: the first and third time periods, the second test limit being based ~~at least partially~~ on
on at least one of: the second and fourth time periods.

Claim 6 (amended): The method of Claim 5, wherein the first test limit is based ~~at least~~ partially on both of the first and third time periods, and the second test limit is based ~~at least~~ partially on both of the second and fourth time periods.

Claim 7 (amended): The method of Claim 1, wherein the act of ~~using~~ determining
includes determining, ~~for each sector,~~ whether ~~the~~ a time period associated with erasing the first
sector exceeds the first test limit ~~associated with the time period of the sector~~ and whether a time
period associated with erasing the second sector exceeds the second test limit.

Claim 8 (original): The method of Claim 1, further comprising executing at least one
parameter test on the device.

Claim 9 (original): The method of Claim 1, wherein the second sector is a boot sector.

Claim 10 (amended): A ~~device~~ system a semiconductor device having ~~at least one~~ a first sector of a first sector type and ~~at least one~~ a second sector of a second sector type, the system comprising:

~~means for a measuring element configured to measure at least one~~ a first time period related to erasing the first sector, the measuring element further configured to measure a second time period related to erasing the second sector;

~~means for an~~ establishing element configured to establish at least a first test limit based at ~~least in part~~ on the first time period, the establishing element further configured to establish a second test limit based on the second time period; and

~~means for measuring at least one second time period related to erasing the second sector;~~

~~means for establishing at least a second test limit based at least in part on the second time~~
period; and

~~means for a determining, using the first and second test limits,~~ element configured to determine whether the device passes or fails an erase test by using the first test limit and the second test limit during the erase test.

Claim 11 (new): The system of Claim 10, wherein the device comprises a plurality of first sectors and a plurality of second sectors, and the first test limit is based on an average of first time periods associated with the first time period for each of the first sectors and the second test limit is based on an average of second time periods associated with the second time period for each of the second sectors.

Claim 12 (new): The system of Claim 10, wherein the measuring element is further configured to measure a third time period related to erasing the first sector and a fourth time period related to erasing the second sector, and wherein the first and second time periods being

erase time periods and the third and fourth time periods being APDE time periods, the first test limit being based on at least one of: the first and third time periods, the second test limit being based on at least one of: the second and fourth time periods.

Claim 13 (new): The system of Claim 12, wherein the first test limit is based on both of the first and third time periods, and the second test limit is based on both of the second and fourth time periods.

Claim 14 (new): The system of Claim 11, wherein the measuring element is further configured to measure a third time period related to erasing each of the plurality of first sectors and a fourth time period related to erasing each of the plurality of second sectors, the first and second time periods being erase time periods and the third and fourth time periods being APDE time periods, the first test limit being based on at least one of: the first and third time periods, the second test limit being based on at least one of: the second and fourth time periods.

Claim 15 (new): The system of Claim 14, wherein the first test limit is based on both of the first and third time periods, and the second test limit is based on both of the second and fourth time periods.

Claim 16 (new): The system of Claim 10, wherein the determining element determines whether a time period associated with erasing the first sector exceeds the first test limit and whether a time period associated with erasing the second sector exceeds the second test limit.

Claim 17 (new): The system of Claim 10, wherein the system executes at least one parameter test on the device.

Claim 18 (new): The system of Claim 10, wherein the second sector is a boot sector.